



BIDDING DOCUMENT

FOR

**SUPPLY, INSTALL, CONFIGURE, TEST, HANDING
OVER & MAINTAIN OF IP SURVEILLANCE
SYSTEMS**

**(FOR NEW HEAD OFFICE BUILDING OF
CEYLON PETROLEUM CORPORATION)**

B/48/2011

CEYLON PETROLEUM CORPORATION

2011

INVITATION FOR BIDS (IFB)

Ceylon Petroleum Corporation (Ministry of Petroleum Industries)

Supply, Install, Configure, Test, Handing Over & Maintain of IP Surveillance Systems - New Head Office Building of Ceylon Petroleum Corporation

PR NO: 400003225

B/48/2011

- i. The Chairman, **Departmental Procurement Committee (DPC)** on behalf of the **Ceylon Petroleum Corporation** invites sealed bids from eligible and qualified bidders for **Supply, Install, Configure, Test, Handing Over & Maintain of IP Surveillance Systems - New Head Office Building of Ceylon Petroleum Corporation** as described below and estimated cost is **Rs. 4 Million (approx.)**
- ii. The period of Construction of this work is **Twelve (12) Weeks**.
- iii. To be eligible for contract award, the successful bidder's previous experience in similar work will be considered.
- iv. Interested bidders may obtain further information from **Manager (Supplies)** and inspect the bidding documents at the address given below **from 0900 hrs to 1500 hrs until 16.12.2011**.
- v. A complete set of Bidding Documents in English language may be purchased by interested bidders on the submission of a written application to the address given below from **0900 hrs to 1500 hrs until 16.12.2011** upon payment of a non refundable fee of **Rs. 2,284.80** (Rs.2,000.00 + 2%NBT + 12%VAT). The method of payment will be by cash.
- vi. Bids shall be delivered to the address **Manager (Supplies), Supplies Function, Ceylon Petroleum Corporation, 1st Floor, No. 609, Danister De Silva Mawatha, Colombo 09.**, on or before **1400 hrs on 19.12.2011**. Late bids will be rejected. Bids will be opened soon after closing in the presence of the bidders' representatives who choose to attend.
- vii. All bids shall be accompanied by a **Bid-Security obtained from a Bank or Treasury approved Insurance Company to a Value of Rs.60,000.00**

The address referred to above is :

Name : Mrs. Kumudunie Hewagamage
Designation : Actg. Dy. Manager (Supplies)
Address : Supplies Function,
Ceylon Petroleum Corporation,
No. 609, Danister De Silva Mawatha,
Colombo 09.
Telephone Nos : 5666442, 5455331 Fax Number : 5455424

CONTENTS

	Page No.
FRONT PAGES	.1 - 3
SECTION 1 - INSTRUCTIONS TO BIDDERS (ITB).....	4 - 5
SECTION 2 - STANDARD FORMS (CONTRACT).....	6 - 12
SECTION 3 - CONDITIONS OF CONTRACT (COC).....	13 -14
SECTION 4 - FORM OF BID AND QUALIFICATION INFORMATION.....	15 -17
SECTION 5 - SCHEDULE.....	18 - 21
SECTION 6 - SPECIAL CONDITIONS OF CONTRACT.....	22 - 26
SECTION 7 - TECHNICAL SPECIFICATIONS	27 - 43
SECTION 8 BILL OF QUANTITIES.....	44 - 46
SECTION 9 - DRAWINGS.....	47 - 52
SECTION 10 - STANDARD FORMS (BID).....	53 - 55
CHECK LIST FOR BIDDERS.....	56

Supply, Install, Configure, Test, Handing Over & Maintain of IP Surveillance Systems



**Ceylon Petroleum Corporation
609, Danister De Silva Mawatha, Colombo- 09.**

NOTES :

This bid document should be read in conjunction with the **INSTITUTE FOR CONSTRUCTION TRAINING AND DEVELOPMENT, STANDARD BIDDING DOCUMENT PROCUREMENT OF WORKS, SECOND EDITION – JANUARY 2007, ICTAD PUBLICATION NO. – ICTAD/SBD/01.**

All Bidders should obtain a copy of the above document and refer to followings:

- Section 1 - Instructions to Bidders
- Section 2 - Standard Forms
- Section 3 - Conditions of Contract
- Section 4 - Form of Bid and Qualification Information
- Section 5 - Schedule
- Section 6 - Special Conditions of Contract
- Section 7 - Technical Specifications
- Section 8 - Bill of Quantities
- Section 9 - List of Drawings
- Section 10 - Standard Forms (Bid)

Section – 1

INSTRUCTIONS TO BIDDERS (ITB)

Notes :

Instructions to Bidders shall be read in conjunction with the Section 5 – Schedule , which shall take precedence over Instruction to Bidders.

Instructions to Bidders will not be a part of the Contract and will cease to have effect once the Contract is signed.

Bidders are advised to consider the information printed in Bold and Italic format in the document as a checklist, when preparing their bids. However, it is the responsibility of the bidders to comply with all the requirements given in the bidding document.

Section – 1

INSTRUCTIONS TO BIDDERS

Instructions to Bidders applicable for this Contract are that given in Section 1 of the Standard Bidding Document for Procurement of Works, Minor Contracts ICTAD Publication No. **ICTAD/SBD/03**, January 2007, published by the Institute for Construction Training and Development [ICTAD], “Savsiripaya”, Wijerama Mwt., Colombo 07.

This publication will not be issued with the Bidding Document and Bidder is advised to purchase it from ICTAD.

General Instructions to Bidders shall be read in conjunction with schedule provided under Section 5 of the Bidding Document.

Section – 2

STANDARD FORMS (CONTRACT)

- *Letter of Acceptance*
- *Agreement*
- *Performance Security*
- *Advance Payment Security*
- *Retention Money Guarantee*

Note :

The bidders are advised to use the information printed in blue in ICTAD/SBD/3 as a check list when submitting the bid. Failure to non compliance with any of them may be a reason for rejection of the Bid.

Notes on Standard Forms:

- *Bidders shall submit the completed Form of Bid Security/Bid Securing Declaration as appropriate in compliance with the requirements of the bidding documents.*
- Bidders should not complete the Form of Agreement at the time of preparation of bids.
- The successful bidder will be required to sign the Form of Agreement, after the award of contract.
- Any corrections or modifications to the accepted bid resulting from arithmetic corrections, acceptable deviations, or quantity variations in accordance with the requirements of the bidding documents should be incorporated into the Agreement.
- The Form of Performance Security, Form of Advance Payment Security and Form of Retention Money Guarantee should not be completed by the bidders at the time of preparation of bids.
- The successful bidder will be required to provide these securities in compliance with the requirements herein or an acceptable to the Employer.

Notes on Form of Letter of Acceptance

The Letter of Acceptance will be the basis for formation of the Contract as described in Clause 1.6.3 of the Instructions to Bidders. This Form of Letter of Acceptance will be filled in and sent to the successful bidder only after evaluation of Bids and after obtaining approval from the relevant authority.

2.1 FORM OF LETTER OF ACCEPTANCE

[Letter heading paper of the procuring entity]

..... *[date]*

To:
[name and address of the Contractor]

This is to notify you that your bid dated ----- *[insert date]* for the construction and remedying defects of the ----- *[name of the Contract and identification number]* for the Contract price of -----*[name of currency]*-----*[amount in figures and words]* as corrected in accordance with Instructions to Bidders and/ or modified by a Memorandum of Understanding, is hereby accepted.

You are hereby instructed to proceed with the execution of the said Works in accordance with the Contract documents.

The Start Date shall be: *(fill the date as per Conditions of Contract).*

The amount of Performance Security is : *(fill the date as per Conditions of Contract).*

The Performance Security shall be submitted on or before *(fill the date as per Conditions of Contract).*

Authorized Signature :

Name and title of Signatory :

Name of Agency :

2.2 FORM OF AGREEMENT

This AGREEMENT made the [day] of [month] 200 [year], between [name and address of Employer] (hereinafter called and referred to as “the Employer”), of the one part, and [name and address of Contractor] (hereinafter called and referred to as “the Contractor”), of the other part:

WHEREAS the Employer desires that the Contractor execute [name and identification no of Contract] (hereinafter called and referred to as “the Works”) and the Employer has accepted the Bid by the Contractor for the execution and completion of such Works and remedying of any defects therein.

The Employer and the Contractor agree as follows::

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract hereinafter referred to.
2. In consideration of the payments to be made by the Employer to the Contractor as indicated in this Agreement, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of the Contract.
3. The Employer hereby covenants to pay the Contractor in consideration of the execute and complete the Works and remedy any defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

In Witness whereof the parties hereto have caused this Agreement to be executed the day and year aforementioned, in accordance with laws of Sri Lanka.

.....

Authorized signature of Contractor

.....

Authorized signature of Employer

COMMON SEAL

COMMON SEAL

In the presence of:

Witnesses :

1. Name and NIC No.
Signature
Address
2. Name and NIC No.
Signature
Address

2.3 FORM OF PERFORMANCE SECURITY (Unconditional)

.....
[Issuing Agency's Name, and Address of Issuing Branch or Office]

Beneficiary:
[Name and Address of Employer]

Date:

PERFORMANCE GUARANTEE No.:

We have been informed that[name of Contractor]
(hereinafter called " the Contractor") has entered into Contract No.....[reference
number of the contract] dated.....with you, for the insert "Construction"
of[name of contract and brief description of
Works] (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance
guarantee is required.

At the request of the Contractor, we.....[name of Agency]
hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of
.....[amount in figures] (.....) [amount in
words], upon receipt by us of your first demand in writing accompanied by a written
statement stating that the Contractor is in breach of its obligation(s) under the Contract,
without your needing to prove or to show grounds for your demand or the sum specified
therein.

This guarantee shall expire, no later than the.....day of....., 20.....[insert date, 28
days beyond the Intended Completion Date] and any demand for payment under it must be
received by us at this office on or before that date.

[Signature(s)]

2.4 FORM OF ADVANCE PAYMENT SECURITY

.....[Name and address
of Agency, and Address of Issuing Branch or Office]

Beneficiary:[Name and Address of Employer]

Date :

ADVANCE PAYMENT GUARANTEE No.:.....

We have been informed that[name of Contractor]
(hereinafter called “the Contractor”) has entered into Contract No.....(reference
number of the contract] dated.....with you, for the
Construction of[name of contract and brief description] (hereinafter
Called “the Contract).

Furthermore, we understand that, according to the conditions of the Contract, an advance
payment in the sum.....[amount in figure] (.....)[amount
in words] is to be made against an advance payment guarantee.

At the request of the Contractor, we.....[name of issuing agency]
Hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount
of.....[amount in figures] (.....)
[amount in words] upon receipt by us of your first demand in writing accompanied by a
written statement stating that the Contractor is in breach of its obligation in repayment of the
advance payment under the Contract.

The maximum amount of this guarantee shall be progressively reduced by the amount of the
advance payment repaid by the Contractor.

This guarantee shall expire on.....[Insert the date, 28 days beyond the expected
expiration date of the Contract]

Consequently, any demand for payment under this guarantee must be received by us at this
office on or before that date.

[Signature(s)]

⁴ The Guarantor shall insert an amount representing the amount of the advance payment and denominated
either in the currency(ies) of the advance payment as specified in the Contract.

2.5 FORM OF RETENTION MONEY GUARANTEE

.....[Issuing Agency's
Name, and Address of Issuing Branch or Office]

Beneficiary :.....[Name and Address
of Employer]

Date :

RETENTION MONEY GUARANTEE NO.:.....

We have been informed that[name of Contractor]
(hereinafter called “the Contractor”) has entered into Contract No.....[reference
number of the contract] dated.....with you, for the execution of[name
of contract and brief description of Works] (hereinafter called “the Contract”).

Furthermore, we understand that, according to the conditions of the Contract, when the works
have being taken over and the first half of the Retention Money has been certified for
payment, payment of the second half of the Retention Money may be made against a
Retention Money guarantee.

At the request of the Contractor, we.....[name of Agency]
Hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount
of[amount in figures] (.....)
[amount in words⁵] upon receipt by us of your first demand in writing accompanied by a
written statement stating that the Contractor is in breach of its obligation under the Contract
because the Contractor has not attended to the defects in accordance with the Contract.

This guarantee shall expire, at the latest,.....[insert 28 days after the end of
the defects liability period]. Consequently, any demand for payment under this guarantee
must be received by us at this office on or before that date.

[Signature(s)]

SECTION - 3

CONDITIONS OF CONTRACT

Conditions of Contract shall be read in conjunction with Section 5- Schedule in Volume 2, which shall take precedence over the Conditions of Contract.

Section – 3

CONDITIONS OF CONTRACT

Conditions of Contract applicable for this Contract are that given in Section 3 of the Standard Bidding Document for Procurement of Works, ICTAD Publication No. **ICTAD/SBD/03**, January 2007, published by the Institute for Construction Training and Development [ICTAD], “Savsiripaya”, Wijerama Mwt., Colombo 07.

This publication will not be issued with the Bidding Document and Bidder is advised to Purchase it from ICTAD.

Conditions of contract shall be read in conjunction with schedule provided under Section 5 of the Bidding Document.

SECTION - 4

FORM OF BID AND QUALIFICATION INFORMATION

Note:

The Form of Bid and Qualification Information included in this publication are samples. The Procuring Entity may modify the Qualification Information and include the Form of Bid and Qualification Information as Section 4 in Volume 2 before issuance of the Bidding Documents.

Note :

Bidders are advised to consider the information printed in Italic format and highlighted in the document as a checklist, when submitting their bids. However, it is a responsibility of the bidders to comply with all the requirements given in the bidding document.

Section - 4

4.1 Form of Bid

Note: Prior to issue of the bidding documents, the Employer should insert relevant data for all items marked with an asterisk (*).

Name of Contract : Supply, Install, Configure, Test, Handing Over & Maintain of IP Surveillance Systems - New Head Office Building of Ceylon Petroleum Corporation

To : CEYLON PETROLEUM CORPORATION

Gentleman,

1. Having examined the Standard Bidding Document - Procurement of Works - Minor Contracts [ICTAD/ SBD/ 03 - Second Edition, January 2007], Schedule, Specifications, Drawings and Bills of Quantities and addenda for the execution of the above-named Works, we/I the undersigned, offer to execute and complete such Works and remedy any defect therein in conformity with the aforesaid Conditions of Contract, Schedule, Specifications, Drawings, Bill of Quantities and Addenda for the sum of Sri Lankan Rupees (LKR) or such other sums as may be ascertained in accordance with the said Conditions.
2. We/I acknowledge that the Schedule forms part of our Bid.
3. We/I undertake, if our Bid is accepted, to commence the Works as stipulated in the Schedule, and to complete the whole of the Works comprised in the Contract within the time stated in the Schedule.
4. We/I agree to abide by this bid for the period stated in the Sub-Clause 15 of Instructions to Bidders or any extended period and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
5. Unless and until a formal agreement is prepared and executed this Bid, together with your written acceptance thereof, shall constitute a binding contract between us/me.
6. We/I understand that you are not bound to accept the lowest or any Bid you may receive.

Dated this day of 20.... in the capacity of duly authorized to sign

tenders for and on behalf of
(IN BLOCK CAPITALS)

Signature :

Address :

Witness :

4.2 Qualification Information (SPECIMEN)

Note: Prior to issue of the bidding documents, the Employer should insert relevant data for all items marked with an asterisk (*).

(to be completed by the bidder and submitted with the Bid)

	Eligibility Requirement	Bidder's Qualification
ICTAD Registration		
Registration number		
Grade	N/A	
Speciality	N/A	
Expiry Date		
Backlisted Contractors		
Have you been declared as a defaulted contractor by NPA or any other Agency?		Yes/No
IF yes provide details		
VAT Registration Number		
Construction Program	(attach as annex)	
Legal status	Public company/Private Company/Partnership/Sole proprietor	
	Eligibility Requirement	Bidder's Qualification
Qualification and experience of key staff	Category, Experience and Qualifications (Insert requirement)*	Required Nos.*
	1	
	2	
	3	
List Other information required	Records of works of similar nature completed within last 5 years	

Signature of the Bidder :

Section – 5

SCHEDULE

Note :

This section shall be read in conjunction with Section 1 – Instructions to Bidders and Section 3 – Conditions of Contract, and is intended to provide specific information in relation to corresponding Clauses in Section 1 & 3. Whenever there is a ambiguity, the provisions in Section 5 – Schedule shall supersede these provided in the Section 1- Instructions to Bidders and Section 3 – Conditions of Contract.

Bidders are advised to consider the information printed in Bold and Italic in the document as a checklist, when submitting their bids.

However, it is the responsibility of the bidders to comply with all the requirements given in the bidding document.

Note :

The Schedule included herein are samples only. The Employer shall fill the necessary information and include them as Section 5 in Volume 2 before issuing the Bidding documents.

Section – 5

5. SCHEDULE

ITB Clause	Conditions of Contract Clause	Item	Data
1.	1.1.8	Employer is :	Name : Ceylon Petroleum Corporation Address: No. 609, Danister De Silva Mawatha, Colombo 09.
1 & 13	1.1.21	Summary of Works	The Works consists of: Location : Head Office Building of CPC located at No: 609, Danister De Silva Mawatha, Colombo 09. Contract Name : Supply, Install, Configure, Test, Handing Over & Maintain of IP Surveillance Systems - New Head Office Building of Ceylon Petroleum Corporation Contract Number : PR No. 400003225
1	1.1.14	Intended Completion Date	Intended Completion Date shall be Twelve (12) weeks from the date of award.
2		Source of Funds	The source of funds is : Ceylon Petroleum Corporation
		Eligibility	The requirement is N/A
12		Documents of the Bid	Any other information

ITB Clause	Conditions of Contract Clause	Item	Data
			<u>OPTION B:</u> Type of Construction : Not applicable
16		Bid Security	Bid shall include a Bid Security • for a amount Rs.60,000.00 • Issued by a Bank or Treasury approved Insurance Company acceptable to Employer using the form for bid security (unconditional guarantee) included in Section 9.1 • Remain valid till 105 days from the date of closing the tender.
31	4.4	Performance Security	Amount of Performance Security required is 10 % of the Initial Contract Price. The form acceptable is given in this tender document
	6.4	Late Completion	The amount to be paid is 1/200 (0.5 percent) of Initial Contract Price per Day, subjected to maximum of 10 % of Initial Contract Price.
	8.1	Notification of Defects	The period for Defect Notification is 365 Days from Taking Over.
	10.3	Retention	The amount of retention is 10% of certified work done. The maximum amount of retention is 5% of Initial Contract Price.

ITB Clause	Conditions of Contract Clause	Item	Data
	10.12	Advance Payment	Upon the payment of the advance payment in full the Employer shall return the original of the advance payment guarantee to the Contractor.
	1.3.1(c)	Insurance, third party	Minimum amount for third party insurance is 10% of the initial contract price
	1.3.1	Insurance for Contractor's Personnel	Minimum amount for Insurance for Contractor's Personnel is 110% of the initial contract price.
33	1.1.11	Adjudicator	Fees and types of reimbursable expenses to be paid to the Adjudicator shall be on a case to case basis and shall be shared by the Contractor and the Employer.
	14.0	Resolution of Disputes	

Section – 6

SPECIAL CONDITIONS OF CONTRACT

6. SPECIAL CONDITIONS OF CONTRACT

6.1 Conditions of Contract (COC)

1. The products should be standard and of reputed company with authorized service provider in Sri Lanka.
2. The bidder should be liable to indemnify the CPC in all respects and meet and pay off the litigation expenses and all the liabilities including damages, sums etc. arising out of and as a consequence of the negligence, deficiencies, mistakes, lapses, delays etc. in the execution of the various jobs and the services provided.
3. The company should ensure quick back up response in case of equipment failure which should be replaced within 8 hours of the distress call.
4. The all quoted products should have required certificate and attached with bid.
5. The successful bidder should maintain the whole system on an ongoing basis, during warranty period. During warranty period all the materials / parts / services as required to maintain the system on an ongoing basis is included in the scope of the job and no extra payment will be made by CPC.
6. Provide service support during business hours, if and when required, besides such other support like 24 X 7 telephonic assistance etc. as may be required so that the system operates on a continuous basis.
7. Successful bidder will be the single point contact for CPC for all support related issues with respect to hardware / software installed by them. If any third party help is required in resolving any issue, it will be the sole responsibility of the bidder to arrange for such help.
8. The system provided should be guaranteed / warranted for any kind of manufacturing defects and satisfactory performance for a period of 36 months from the date of acceptance/ final sign off obtained.
9. Any upgrades to the software with respect to firmware and revision during the period of contract and warranty should be provided by the successful vendor at no extra cost to CPC.
10. The system will be accepted by CPC based on the following criteria:
 - a. All systems to be verified operational as defined in the scope of work.
 - b. Surveillance system installed and functioning, as described in this document.
 - c. All manuals and drawings are delivered to CPC.
 - d. All the administration passwords and documents shall be handed over in written to CPC.
 - e. All software / camera licenses are delivered to CPC.
11. Payment Method
Payments shall be made as follows

1.	After receiving equipments	60 % total bid value
2.	Testing, completion & Handing over of the Project	Balance 40%

Note (A): 20% of the total contract value will be made as a Mobilization Advanced Payment to the successful contractor on submission of a bank guarantee from a recognized commercial bank operating in Sri Lanka and approved by the Central Bank of Sri Lanka. The advanced payment made will be recovered from the stage payments at the rate of 25% until the full advanced payment is settled.

Note (B): 5% will be withheld from each payment as retention money up to the completion of 03 years warranty period.

Note (C): Final payment value calculate by measure & pay method

12. No extra cost should be paid for miscellaneous items if required to complete the work as per the design concept.

6.2 Scope of Works

Scope of work includes but is not limited to the supply, installation, implementation, commissioning, handing over, training, providing user manual, providing 36 months warranty including all hardware, software, materials, services and support etc. for providing an IP Video Surveillance System so as to fulfill the specification listed in this document.

1. The entire IP surveillance system is designed to control and monitor the different locations of the CPC New Head Office Premises.(Annex – A) All lift lobbies should have IP Fixed dome camera to monitor the connecting corridors. IP PTZ dome camera shall be installed at the building entrance and specified outdoor locations.(Annex – B) There would be four(4) types of cameras that will be installed to monitor the movement of the people and vehicles are as follows:
 - a) Indoor type IP based fixed dome camera
 - b) Outdoor type IP based PTZ dome camera
 - c) Indoor type IP based PTZ dome camera
 - d) Outdoor type IP based fixed dome camera
2. Outdoor type IP PTZ dome camera shall be mounted on different locations for outside premises surveillance purpose.
3. All Outdoor type IP PTZ dome camera shall be in IP-66 class ingress protection housing.
4. The indoor/outdoor fixed dome camera should be based on open streaming architecture (OSA) standards, which are documented in an application programming interface (API), and shall operate in the provided environment as well as in third-party software recording solutions.
5. To achieve interoperability with network video implementations from different network video vendors, the indoor/outdoor fixed dome camera shall also be compliant with the requirements laid down by the Open Network Video Interface Forum (ONVIF) in Version 1.0 of its Open Network Video Interface Forum Core Specification.
6. All outdoor items for cameras like JBs, power supply, media convertor etc. shall be in water poof and dust proof housing.
7. The cameras should be installed with the necessary arrangements such as poles, mounts, etc.

8. All the indoor / outdoor cameras & control equipment shall be suitable for operation from temperature as mentioned in the technical specifications.
9. CPC Would provide the necessary utility power for the installation and commissioning PTZ & Fixed Dome Cameras
10. UPS Power protection should be provided by the bidder for all the outdoor cameras installation, Video Storage and the management platform.
11. The entire installation should be as per BOQ, drawings and technical specifications enclosed with bid documents.
12. CCTV management software shall offer both video stream management and archived video storage management. Recording frame rate and resolution in respect of individual channel shall be programmable.
13. The system is presently designed for 14 cameras where as not limited to the same and scalable to future upgrades to at least 30 IP based CCTV Cameras
14. The bidder should provide all supervisory specialists and technicians at the job to assist in all phases of system installation, start up and commissioning.
15. Provision of Power supply unit as required for Outdoor cameras.
16. Provisioning of IEEE 802.3af POE injector units required for indoor cameras.
17. Integrated testing and commissioning of CCTV system on LAN
18. Training & handing over of all materials, equipment and appliances to CPC
19. Monitoring, Control & Storage application software should support:
 - a. More than Sixteen (16) simultaneous connections for recording and monitoring without lag and with different
 - b. Multiple screen layouts and full screen display.
 - c. Multichannel monitoring & recording simultaneously.
 - d. Manual, event driven and scheduler recording mode.
 - e. Remote PTZ camera control.
 - f. Hard disk storage indicator and alarm
 - g. High compression ratio and storage capacity
 - h. Audio monitoring / recording support
 - i. Simultaneously multiple window controlling
 - j. Simultaneous Real time monitoring, PTZ control & audio & video recording
 - k. High quality video, up to full screen display
 - l. High compression ratio
 - m. Account password protection
 - n. The software should support the video server/encoder and IP camera for future up gradation if required.
 - o. The playback should support various schemes with

- i. Date and time interval.
 - ii. Event triggered preview for every camera.
 - p. The playback module should offer various controls like play, stop, pause, fast forward, slow forward, pull-bar, zoom in and zoom out.
20. The successful bidder should carry out the performance test run of the complete system at site after satisfactory installation / implementation under bidder & CPC supervision. Training of operators should be as per details mentioned in this document after commissioning of the system without any extra cost to CPC.
21. Training to CPC staff:
The successful vendor will train CPC personnel at two levels
- a. Vendor shall provide comprehensive training (Install, Trouble shooting & maintenance of system) of 2 days to minimum Three (3) CPC engineers & Three (3) technicians. This training shall be preferably arranged before commissioning of the system.
 - b. Vendor shall also provide operational training to minimum 12 nos. of security & operational staff for 2 days at site.
22. Supply any other items/accessories required for installation, testing and commissioning of CCTV system.
23. Outdoor camera arrangement describe annex 3 & 4

7. TECHNICAL SPECIFICATIONS

7 Technical specifications

7.1 Technical Specification for the IP Base Fixed-Dome Indoor Camera with Day/Night Operations

Technical Specification				Bidder Response	Technical References (Page Number)
1	The Offered CCTV IP Based DOME Camera should be of European or Japanese make.				
2	Model				
3	Country of Origin				
4	Country of Manufacture				
5	3 Year Comprehensive Warranty and Services				
6	Camera Specifications				
6.1	Image Sensor	CCD Type			
6.2	Progressive Scan	Should be user configurable			
6.3	Video Streaming	Should support Simultaneous H.264 or MPEG-4 and MJPEG streaming			
6.3.1.	Should Support Two-way Audio				
6.3.2	Should Support Day/Night Operations				
6.3.3	Should consist of Auto Iris Type Lense				
6.3.4	Should consist of at least 1 Input and 1 Output contact				
6.3.5	Shall have ONVIF Standard Compliance				
6.4	Resolution/Frame Rate				
6.4.1	Compression	720x480	1280x720		
6.4.2	H.264	At least 20fps	At least 25fps		
6.4.3	MPEG-4	At least 20fps	At least 35fps		
6.4.4	MJPEG	At least 20fps	At least 25fps		
6.5	Video Compression	Should Support H.264,MPEG-4 and MJPEG			
6.6	Minimum Illumination	0.3 lux or better			
6.7	Shutter Speed	1 - 1/10000s			
6.8	Signal-to-Noise Ratio	>50dB or better			
7	Image Control				
7.1	Brightness	Should be user configurable			
7.2	Exposure	Should be user configurable			
7.3	Sharpness	Should be user configurable			
7.4	Backlight Compensation	Should be user configurable			
7.5	Contrast	Should be user configurable			
7.6	White Balance	Should be user configurable			
7.7	Saturation	Should be user configurable			
7.8	Wide Dynamic Range	Should be user configurable			
7.9	Noise Reduction	Should be user configurable			
7.10	Rotation	Flip Operations and 180° Rotatable			

7.11	Digital Zoom	Up to 12x		
8	Camera Functions			
8.1	Motion Detection	Should be user configurable		
8.2	Privacy Masks	At least 3		
8.3	On Screen Display	Date, Time, Title (at least 10 characters)		
8.4	Local Recording Option	Should support Continuous, Scheduled and Alarm conditions recording		
9	Audio			
9.1	Bidirectional	Line out, and Line in		
9.2	Compression	G711 or G726		
10	Local Storage	Should support Micro SD card storage up to 20GB		
11	Network Connectivity			
11.1	Interface Type	10/100 Ethernet (RJ-45)		
11.2	Protocol Support	TCP/IP		
		UDP		
		RTP		
		RTSP		
		HTTP		
		ICMP		
		FTP		
		SMTP		
		DHCP		
		NTP		
		IGMP		
11.3	Password Levels	User and Administrator		
11.4	Internet Browser Support	All common internet browsers		
11.5	User Accounts	At least 5 local user accounts		
12	Operational Environmental Conditions			
12.1	Operating Temperature	+10°C to +45°C		
12.2	Relative Humidity	10-90% with no condensation		
12.3	Enclosure	Should consist of a IP66 class enclosure		
13	Powering			
13.1	Power	IEEE 802.3af Power-over-Ethernet support		
14	The Bidder should provide all related accessories including passive Fiber optic accessories for the successful implementation of the system			

2. Technical Specification for the Outdoor IP Based PTZ Dome CCTV Outdoor Camera with Day/Night Operation

Technical Specification				Bidder Response	Technical References (Page Number)
1	The Offered CCTV IP Based PTZ DOME Camera should be of European or Japanese make.				
2	Model				
3	Country of Origin				
4	Country of Manufacture				
5	3 Year Comprehensive Warranty and Services				
6	Camera				
6.1	Image Sensor	CCD Type			
6.2	Optical Zoom	At least 30x			
6.3	Digital Zoom	At least 10x			
6.4	Resolution	NTSC	PAL		
6.4.1	Effective Pixels	At least 380k	At least 440k		
6.4.2	Horizontal Resolution	At least 540 TVL	At least 540 TVL		
6.4.4	D1	At least 720x480	At least 720x576		
6.4.5	½D1	At least 352x480	At least 352x576		
6.7	Minimum Illumination	0.05 lux or better			
	Electronic Shutter Speed	1~1/10 ksec or better.			
6.9	Focus Mode	Should be user configurable			
	Focal Length	At least 3 -100mm			
6.10	White Balance	Should be user configurable			
6.11	Iris Control	Should be user configurable			
6.13	Backlight Compensation	Should be user configurable			
7	Functions				
7.1	Motion Detection	Should be user configurable			
7.2	Wide Dynamic Range	Should be user configurable			
7.3	Day/Night (IR-cut filter)	Should be user configurable			
7.4	Privacy Masks	At least 4			
7.5	Directional OSD Support	Compass direction			
		Azimuth			
		Elevation			
8	Video				
8.1	Simultaneous Number of Video Streams Supported	2x H.264,			
		2x MPEG-4			
		MPEG-2 and/or MJPEG Streams			

8.2	Frame Rate	Should support 1 to 20 fps		
8.3	Compression Algorithm	H.264		
		MJPEG,		
		MPEG-4		
		MPEG-2		
8.4	Type of Streaming	UDP/IP		
		TCP/IP (RTP over RTSP)		
8.5	Number of Output Streams	At least 10		
8.6	Encoding Latency	< 200 ms or better		
8.9	Output Data Rate	At least 10 Mbp/s		
8.10	Video Settings	Should be user configurable		
9	Audio			
9.1	Two-Way Audio	Support for Line Out, Line In		
10	Network			
10.1	Interface Options	Fiber Interface supporting 100/1000Mbps with Multimode SFP type LC connector.		
10.2	Network Protocol Support	RTP		
		UDP		
		IP		
		DHCP		
		IGMPv2		
		RTSP		
		(S)NTP		
		HTTP		
10.3	Management and Control Protocol support	DiffServ		
		SNMP v2		
11	Image Quality and Tampering Alarm	The Camera should consist of features to check health of the camera which monitors key parameters such as noise, sharpness and noise		
12	Pan/Tilt Features			
12.1	Pan Travel	360° Continuous		
12.2	Tilt travel	-10° ~ 190°		
12.3	Preset Speed	400°/sec		
12.4	Number of Preset	At least 200		
12.5	Manual Speed	0.5° ~ 90° /sec		
12.6	Auto Flip	Should be user configurable		
13	Operational Environmental Conditions			
13.1	Operating Temperature	+10°C to +45°C		
13.2	Ingress Protection	Should consist of an IP66 class enclosure		

14	System Powering			
14.1	Power	220-240V / 50 Hz		
	Power Supply Unit	Should be enclosed in an IP66 grade enclosure suitable for outdoor use		
15	The Bidder should provide all related accessories for the successful installation and commissioning of the system			

3. Technical Specification for the IP Base Fixed-Dome Outdoor Camera with Day/Night Operations

Technical Specification				Bidder Response	Technical References (Page Number)
1	The Offered CCTV IP Based DOME Camera should be of European or Japanese make.				
2	Model				
3	Country of Origin				
4	Country of Manufacture				
5	3 Year Comprehensive Warranty and Services				
6	Camera				
6.1	Image Sensor	CMOS Type			
6.2	Progressive Scan	Should be supported			
6.3	Video Streaming	Should support Simultaneous H.264 streaming and MJPEG			
6.3.1.	Should Support Two-way Audio				
6.3.2	Should Support Day/Night Operations				
6.3.3	Should consist of a Fixed Iris Type Lense				
6.3.5	Should be ONVIF Compliant				
6.4	Resolution/Frame Rate				
6.4.1		H.264	MJPEG		
6.4.2	Single Stream	At least 1920x1080 at 20fps	1920x1080 at 20fps		
6.4.3	Dual Stream	At least 720p at 20fps	At least 720p		
6.5	Video Compression	Should support H.264			
6.6	Minimum Illumination for color video	0.8 lux or better			
6.7	Shutter Speed	1 - 1/10000s			
6.8	Signal-to-Noise Ratio	>40dB or better			
7	Image Control				
7.1	Brightness	Should be user configurable			
7.2	Exposure	Should be user configurable			
7.3	Sharpness	Should be user configurable			
7.5	Contrast	Should be user configurable			
7.6	White Balance	Should be user configurable			
7.7	Saturation	Should be user configurable			
7.10	Rotation	Flip Operations and 180° Rotatable			
8	Camera Functions				
8.1	Motion Detection	Should be user configurable			
8.2	Privacy Masks	At least 1			
8.3	On Screen Display	Should support in screen display of date, time and title			
8.4	Local Recording	Should provide Continuous,			

	Support	Scheduled and Alarm based local recording		
9	Audio			
9.1	Type	Unidirectional with Mic-in Support		
9.2	Audio Compression	G711 or G726		
10	Local Storage	Micro SD card up to 20GB, should be included with the camera		
11	Network Connectivity			
11.1	Interface Type	At least 1, 10/100 Ethernet (RJ-45) type interface		
11.2	Protocol Support	TCP/IP		
		UDP		
		RTP		
		RTSP		
		HTTP		
		ICMP		
		FTP		
		SMTP		
		DHCP		
		NTP		
		IGMP		
11.3	Password Levels	User and Administrator Accounts		
11.4	Web based access	Should support web based interface access of the camera by all commonly used internet browsers		
11.5	User Accounts	At least 5 local user accounts should be supported on the camera		
12	Operational Environmental Conditions			
12.1	Operating Temperature	+10°C to +45°C		
12.2	Relative Humidity	10-90% with no condensation		
12.3	Enclosure	Should consist of an IP 66 Ingress class Enclosure		
12.4	Impact Rating	Compliance to IK10		
12.5	Vibration Rating Standards	The Camera should be designed in accordance to EN50155 standards		
13	System Powering			
13.1	Power	Via IEEE 802.3af Power-over-Ethernet		
14	The Bidder should provide all related accessories including passive Fiber optic accessories for the successful implementation of the system			

4. Technical Specification for the Outdoor IP Based PTZ Dome CCTV Indoor Camera with Day/Night Operation

Technical Specification			Bidder Response	Technical References (Page Number)
1	The Offered CCTV IP Based PTZ DOME Camera should be of European or Japanese make.			
2	Model			
3	Country of Origin			
4	Country of Manufacture			
5	3 Year Comprehensive Warranty and Services			
6	Camera			
6.1	Image Sensor	CCD Type		
6.2	Optical Zoom	At least 20x		
6.3	Digital Zoom	At least 10x		
6.4	Resolution	NTSC	PAL	
6.4.1	Effective Pixels	At least 300k	At least 400k	
6.4.2	Horizontal Resolution	At least 500 TVL	At least 450 TVL	
6.4.4	D1	At least 720x480	At least 720x576	
6.4.5	½D1	At least 352x480	At least 352x576	
6.5	Minimum Illumination	0.1 lux or better		
6.5.1	Focus Mode	Should be user configurable		
6.5.2	White Balance	Should be user configurable		
6.5.3	Iris Control	Should be user configurable		
6.5.4	Backlight Compensation	Should be user configurable		
7	Camera Functions			
7.1	Motion Detection	Should be user configurable		
7.2	Wide Dynamic Range	Should be user configurable		
7.3	Day/Night with IR-cut filter feature	Should be user configurable		
7.4	Privacy Masks	At least 10		
7.5	Directional OSD Support	Should support Compass direction		
		Should support Azimuth		
		Should support Elevation		
8	Video			
8.1	Simultaneous Number of Video Streams Supported	At least two H.264 Streams		
		At least two MPEG-4 Streams		
		MPEG-2 and/or MJPEG Streams		
8.2	Frame Rate	At least 20fps		
8.3	Compression Algorithm	H.264		
		MJPEG		
		MPEG-4		
		MPEG-2		

8.4	Type of Streaming	UDP/IP		
		TCP/IP (RTP over RTSP)		
8.5	Number of Output Streams	At least 10		
8.6	Encoding Latency	< 200ms or better		
8.9	Output Data Rate	At least 10 Mbp/s		
8.10	Video Settings	Should be user configurable		
9	Audio			
9.1	Two-Way Audio	Should Support for Line Out and Line In		
10	Image Quality and Tampering Alarm	The Camera should consist of features to check health of the camera which monitors key parameters such as noise, sharpness and noise		
11	Network			
11.1	Interface Option	Fiber Interface supporting 100/1000Mbps with Multimode SFP connector with SC connector interface		
11.2	Network Protocol Support	RTP		
		UDP		
		IP		
		DHCP		
		IGMPv2		
		RTSP		
		(S)NTP		
		HTTP		
		DiffServ		
		SNMP v2		
12	Pan/Tilt Features			
12.1	Pan Travel	360° Continuous		
12.2	Tilt travel	-10° ~ 190°		
12.3	Preset Speed	At least 300°/sec		
12.4	Number of Preset	At least 200		
12.5	Manual Speed	At least 10° ~ 50° /sec		
13	Operational Environmental Conditions			
13.1	Operating Temperature	+10°C to +45°C		
14	System Powering			
14.1	Power	220-240V / 50 Hz		
15	The Bidder should provide all related accessories including passive Fiber optic accessories for the successful implementation of the system			

8 Technical Specification for the Network Video Recorder

Technical Specification			Bidder Response	Technical References (Page Number)
1	Brand.			
2	Model			
3	Country of Origin			
4	Country of Manufacture			
5	3 Year Comprehensive Warranty and Services			
6	Video Features			
6.1	Should Support at least 16 Streaming Video Inputs			
6.2	The Video images should be remotely viewable preferably from the internet			
6.3	Supported Streams	MPEG-2 , MPEG-4 and H.264		
6.4	Maximum Recording/Playback Stream Rate	At least 5Mbps per stream		
7	Storage			
7.1	Should consist of at least 2TB of dedicated storage space with RAID-5 Protection			
8	Security			
8.1	Authorization	Multilevel Password Protection		
8.3	Image Authentication	Checksum based image authentication		
10	Events Scheduling			
10.1	Event Triggers	Intelligent video motion detection		
		External alarm/event triggers from cameras (Contact Closures)		
10.2	Network Interfaces	At least 2 Nos of 10/100/1000Mbps Interface		
10.3	Export/Import Media	Should support CD/DVD Writer/Player		
11	System Powering			
11.1	Power Supply	220-240V / 50Hz		
12	The Bidder should provide all related accessories including passive Fiber optic accessories for the successful implementation of the system			

9 Technical Specification for the Video Management Software

Technical Specification		Bidder Response	Technical References (Page Number)
1	Make		
2	Model		
3	Country of Origin		
4	Country of Manufacture		
5	3 Year Comprehensive Warranty and Services		
6	General Specifications		
6.1	Number of Cameras	At least 50	
6.2	Compression Support	MPEG-2, MPEG-4, MJPEG, H.264	
6.3	Should provide dual monitor support		
7	Should provide live view support		
7.1	Maximum Number of Live Views	At least 12	
7.2	Should provide Video Wall Support		
7.3	Should provide Predefined Views		
8	Video Recording Features		
8.1	Should Support Manual Recording		
8.2	Should provide Recording on Event		
8.3	Should provide Snapshot support		
9	PTZ Support		
9.1	Should provide Preset Support		
9.2	Should consist of a Joy Stick Controller interfaces via standard USB interface for the PTZ Type camera movement. Each viewing station should be provided with a Joy Stick Controller		
10	Hardware and Software License		
10.1	For deploying the software the bidder should provide a complete 1 Monitoring Station Hardware solution together with dual TFT Type screens. (As per the technical specification item no - 07).		
10.2	The Bidder should include all related original product licenses together with the necessary licenses for the host operating systems of the monitoring stations.		

10 Technical Specification for the Desktop Computer (Monitoring Station)

	Minimum Specification		Bidder's Response	Reference Details
1	Make			
2	Model			
3	Country of Origin			
4	Warranty - 3 Years Comprehensive			
5	Processor	At least Intel Core i5 3Ghz		
6	Cache Memory	Minimum 4MB cache		
7	Form Factor	Micro Tower		
8	Memory	At least 4 GB DDR3		
9	Memory Slots	4 DIMM Slots		
10	Hard disk drive	160 GB SATA , 7200 rpm		
11	Network	10/100/1000 Gigabit Ethernet		
12	Optical Drive	DVD RW		
13	Video			
	13.1	Capacity	256 MB	
	13.2	Video Output	Should consist 2 Video / monitor out put	
	13.3	Video Ports	VGA DVI /HDMI	
14	Display	Minimum 21' inch LCD (Square type preferred), 2 Monitors per station		
15	Ports			
	15.1	VGA	Minimum 2	
	15.2	DVI	Minimum 1	
	15.3	RJ 45	2 ports	
	15.4	USB	Front -2, Rear -4	
	15.5	Audio	Line in /out, Mic in	
16	Operating System	Windows 7 Professional License Edition Original License and the media should be provided.		

11. Technical Specification for The UPS Type – 1 (2KVA)

	Minimum Specification			Bidder's Response	Reference Details
1	Make				
2	Model				
3	Country of Origin				
4	Warranty - 3 Years				
5	Capacity	2KVA			
6	Display	Should consist of a LCD Display			
7	Input				
	7.1	Voltage	220/230V		
8	Output				
	8.1	Voltage	220/230 V		
	8.2	Mode	Line Interactive		
	8.3	Frequency	50Hz - 60Hz		
9	Battery				
	9.1	Backup Time	At least 10 minutes		
	9.3	Recharge Time	Within at least 4-6 hours to 90% after complete discharge		
10	Transfer Time		At least 2 - 4ms		
11	Protection				
	11.1	Full protection	Discharge, overcharge and overload		

11 Technical Specification for the UPS Type -2 (700VA)

	Minimum Specification			Bidder's Response	Reference Details
1	Make				
2	Model				
3	Country of Origin				
4	Warranty - 3 Years				
5	Capacity	700VA			
6	Display	Should consist of a LCD Display			
7	Input				
	7.1	Voltage	220/230V		
8	Output				
	8.1	Voltage	220/230 V		
	8.2	Mode	Line Interactive		
	8.3	Frequency	50Hz - 60Hz		
9	Battery				
	9.1	Backup Time	At least 10 minutes		
	9.3	Recharge Time	Within at least 4-6 hours to 90% after complete discharge		
10	Transfer Time		At least 2 - 4ms		
11	Protection				
	11.1	Full protection	Discharge, overcharge and overload		

12 Technical Specifications of Fiber Optic Cable

Technical Specification		Bidder Response	Technical References (Page Number)
1	Make		
2	Model		
3	Country of Origin		
4	Country of Manufacturing		
5	Cable Performance Warranty 25 Years		
6	All Fiber Cables used should be meet IEEE 802.3 TIA/EIA-568 standards		
7	Multimode fiber cables should be of OM3 type		
8	All multimode fiber cables should consist of 4 cores (50/125µm type) and should support wavelengths up to at least 850nm.		
9	Armored indoor/outdoor fiber Cables should be used for all fiber cabling work		
10	Fiber Tubes should be with Standard Colors for the easy Identification of the Links		
11	The Fiber Cable should support for present LAN technologies and the Scalability to support 10 Gigabit Ethernet in the future.		
12	All Fiber Cores should be terminated using fusion splicing technology and OM3 grade multimode pigtails should be used for all termination works		

11. Technical Specifications for Fiber Optic Network Enclosure

Technical Specification			Bidder Response	Technical References (Page Number)
1	Model			
2	Country of Origin			
3	Country of Manufacture			
4	3 Year Comprehensive Warranty and Services			
5	The enclosure should be constructed of materials capable of withstanding harsh indoor and outdoor conditions, such as UV degradation, chemical exposure, and freezing temperatures			
6	Should accommodate up to at least 6 Fibers and 4 fusion splicing terminations			
7	Construction material	Thermoplastic Composite		
8	Base features	Compact molded splice tray which includes 40mm fusion splice sleeves		
		Accommodates one 12-fiber splice tray and up to 4 terminations		
		Flexible grommets provide sealing for cable entry ports		
9	Cover Door Features	Secure fit provides maximum protection from the elements and foreign matter intrusion		
		Side hinged to allow convenient access to all components		
		Unique detent/release mechanism provides easy installation and servicing, holding the door open for service or maintenance		
		Should Includes provisions for padlock (padlock not included).		
10	Dimensions	At least 10" x 6" x 3" (inches)		
11	Should consist of 6 SC adapters and 1 splice tray			
12	Fiber Termination Should be done using OM3 Grade SC Pigtailed and Fusion Splicing Technology			
13	All Fiber Cores should be Terminated into the patch panel			
14	Pre-terminated OM3 Grade (50/125µm type) LC-SC Fiber Patch Cord of 10m length should be used to connect up to the CCTV Camera from the enclosure patch panel. The Patch cord should be fully enclosed in an IP66 compliant tubing system			

12. Technical Specifications for Unshielded twisted Pair (UTP) Category 6 Patch Cables

Technical Specification		Bidder Response	Technical References (Page Number)
1	Model		
2	Country of Origin		
3	Country of Manufacture		
4	Cable Performance Warranty 25 Years		
5	Fly leads with 3m length must be provided for connecting the CCTV camera to the Information Outlet		
6	UTP fly leads should comply with category 6 or higher depending on main structured cabling which will be in place		
7	The fly leads should support LAN technologies such as Fast Ethernet (100Mbps) and Gigabit Ethernet (1000Mbps)		
8	The patch leads and fly should meet TIA/EIA-568 and ISO/IEC standards		
9	The patch lead and fly leads should be factory made, tested and certified.		

13. Technical Specifications For POE Injector

Technical Specification		Bidder Response	Technical References (Page Number)
1	Model		
2	Country of Origin		
3	Country of Manufacture		
4	Cable Performance Warranty 25 Years		
5	Number of Ports	At least 1	
6	Should be backward compatible with IEEE 802.3af and IEEE 802.3at		
7	Pass Through Data Rates	10/100 Mbps	
8	Power over Ethernet Output		
8.1	Output Power Voltage	At least 45Vdc	
8.2	User Port Power	At least 35Watts	
9	Input Power Requirement		
9.1	AC Input Voltage & Frequency	220-240VAC / 50Hz	
10	System Indicators	AC Power	
		User Power Indicator	
11	Connectors	RJ-45 complying with EIA 568A and 568B	
12	Operational Environmental Conditions	+10 to+ 40C	
13	Operating Humidity	Maximum 90%, Non-condensing	
14	Mandatory Surge Protection features	Should Meets Surge Protection as specified in GR-1089-Core Criteria B: ± 1000V/100A @10/1000 [µS] Waveform ± 2500V/500A @2/10 [µS] Waveform ± 1000V/25A @10/360 [µS] Waveform	
15	Safety Approvals	UL/cUL Per EN 60950-1	
		GS Mark Per EN 60950-1	

14. Technical Specifications for Power Line Protectors

Technical Specification			Bidder Response	Technical References (Page Number)
1	Model			
2	Country of Origin			
3	Country of Manufacture			
4	Warranty 03 Years			
5	Operating Voltage	230 V 50 Hz		
6	Maximum surge current	13KA		
7	Maximum Load Current	06 A		
8	Working voltage	230 AC single phase		
9	Terminal capacity	2.5 mm ²		

15. Technical Specifications for RJ 45 type Surge Protectors

	Minimum Specification	Bidder's Response	Reference Details
1	Make		
2	Model		
3	Country of Origin		
4	Warranty - 3 Years		
5	Should Support Interfacing With Standard RJ-45 Type Connectors		
6	Impedance Characteristics should be at least 100 Ohms		
7	Supports data rates up to 10 Mbps		
8	Maximum Discharge Current – 5KA		
9	Response time <=1ns		
10	Should be able to handle repeated surges without degrading in performance		

Section - 8

BILL OF QUANTITIES

Note : In preparation of the Bidding Document the users are advised to;

- (1) Include appropriate Preliminary Bill items as Bill No.01 in accordance with ICTAD Publication No. ICTAD/ID/04*
- (2) Allow provision for the Bidders to include the VAT Component separately and instruct them not to carry the VAT component to the Form of Bid.*
- (3) Advise the bidders that any discount offered will not be considered for Provisional Sum Items.*

8. Bill of Quantities (BOQ) / Price List

	Description	Quantity	Unit	Rate	Amount
1.	Technical Specification for the IP Base Fixed-Dome Indoor Camera with Day/Night Operations (As per the technical Specification Ref-01)	10	Nos.		
2.	Technical Specification for the Outdoor IP Based PTZ Dome Outdoor Camera with Day/Night Operation (As per the technical Specification Ref-02)	02	Nos.		
3.	Technical Specification for the IP Base Fixed-Dome Outdoor Camera with Day/Night Operations (As per the technical Specification Ref-03)	01	Nos.		
4.	Technical Specification for the Outdoor IP Based PTZ Dome Indoor Camera with Day/Night Operation (As per the technical Specification Ref-04)	01	Nos.		
5.	Technical Specification for the Network Video Recorder (As per the technical Specification Ref-05)	01	Nos.		
6.	Technical Specification for the Video Management Software (As per the technical Specification Ref-06)	01	Nos.		
7.	Technical Specification for the Desktop Computer /Monitoring Station (As per the technical Specification Ref-07)	01	Nos.		
8.	Technical Specification for The UPS Type – 1 (2KVA) (As per the technical Specification Ref-08)	01	Nos.		
9.	Technical Specification for the UPS Type -2 (700VA) (As per the technical Specification Ref-09)	02	Nos.		
10.	Technical Specifications of Fiber Optic Cable (As per the technical Specification Ref-10)	80	m		
11.	Technical Specifications for Fiber Optic Network Enclosure (As per the technical Specification Ref-11)	02	Nos.		
12.	Technical Specifications for Unshielded twisted Pair (UTP) Category 6 Patch Cables (As per the technical Specification Ref-12)	42	Nos.		
13.	Technical Specifications For POE Injector (As per the technical Specification Ref-13)	12	Nos.		
14.	Technical Specifications for Power Line Protectors (As per the technical Specification Ref-14)	02	Nos.		
15.	Technical Specifications for RJ 45 type Surge Protectors (As per the technical Specification Ref-15)	01	Nos.		
16.	Installation / Engineering Charges				
17.	Cabling Cost (If Needed)				
	Sub Total				
	2% NBT				
	12% VAT				
	Grand Total				

Total Amount in Words:

.....

VAT Registration No:

Name of Bidder:

.....

Address:

.....

.....

Tel. & Fax No:

Date :

.....

Signature and Seal of the Bidder

Section – 9

DRAWINGS

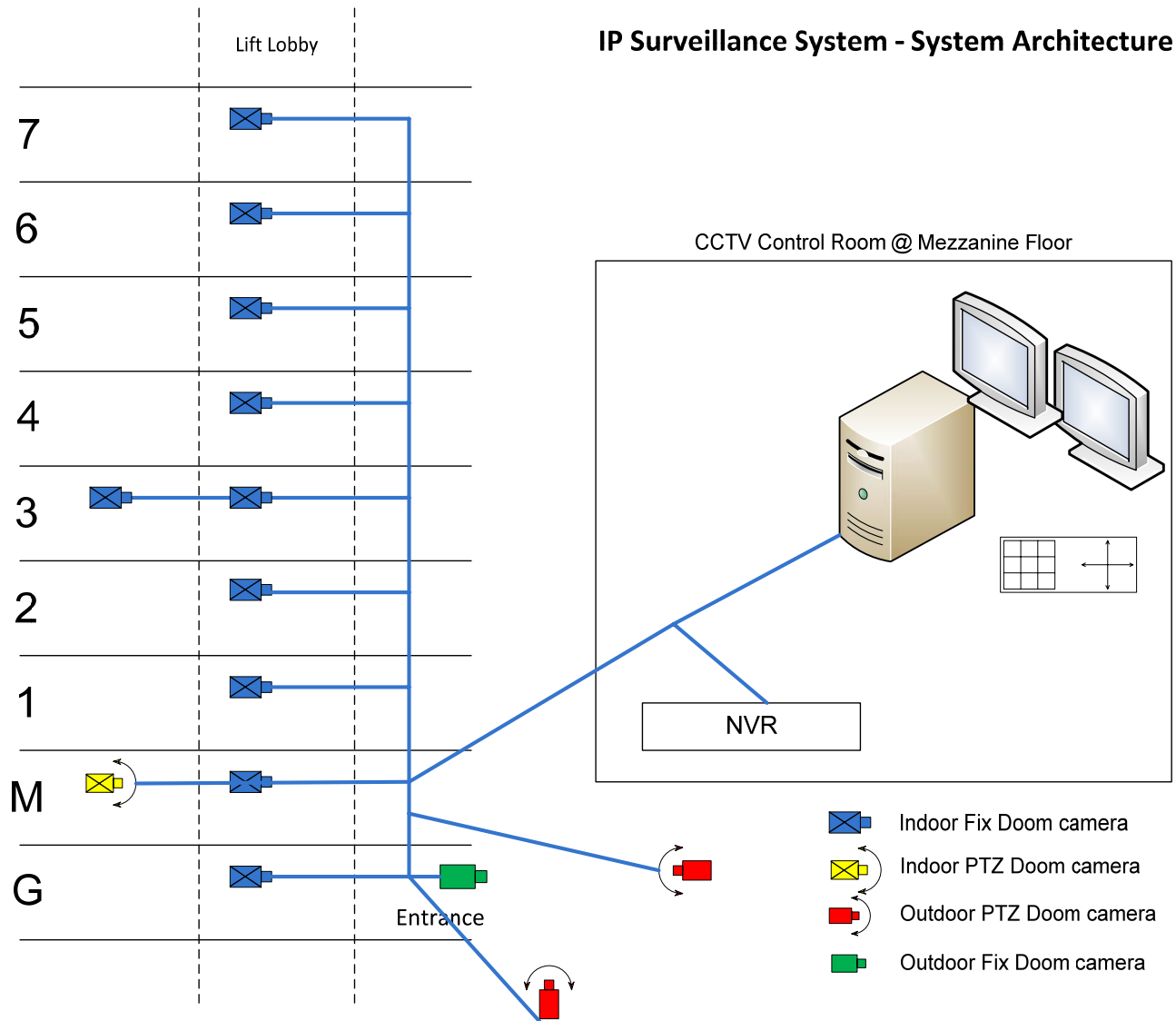
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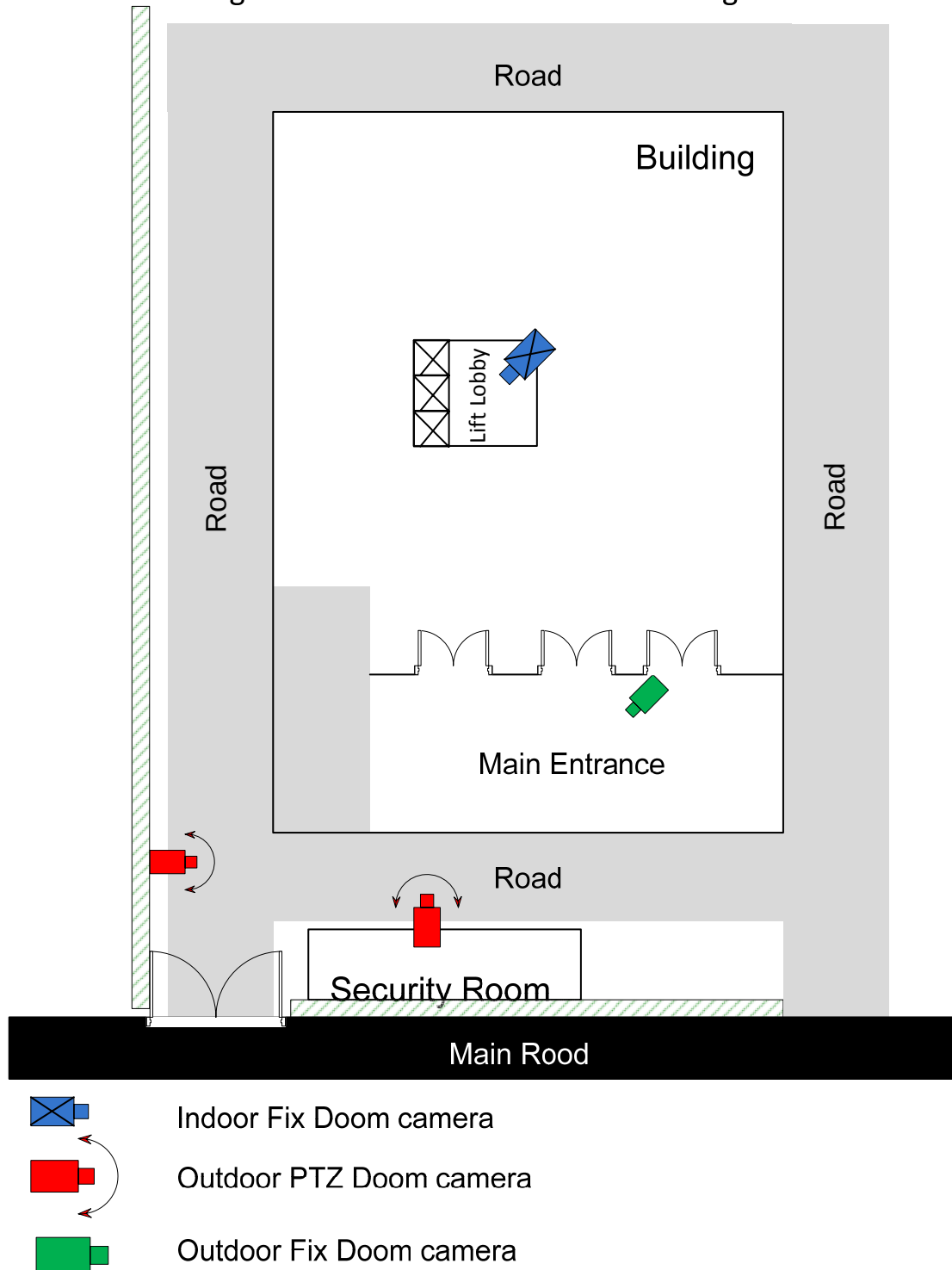
Annexure Index

- 12.1 IP Surveillance System - System Architecture
- 12.2 CCTV Outdoor & Lift Lobby Camera Arrangement
- 12.3 Power & Data Cabling for PTZ outdoor camera
- 12.4 Power & Data Cabling for PTZ outdoor camera

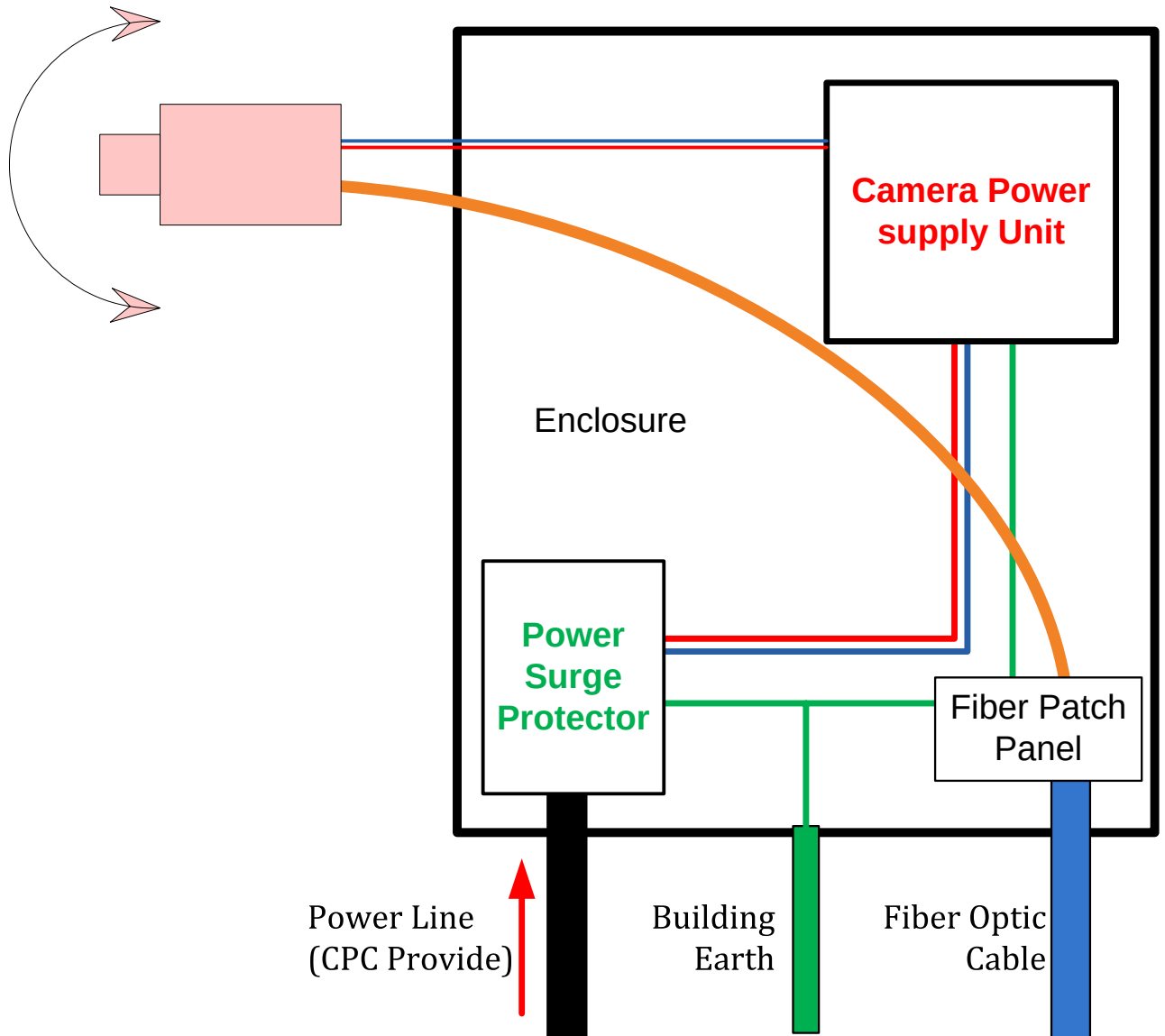
IP Surveillance System - System Architecture



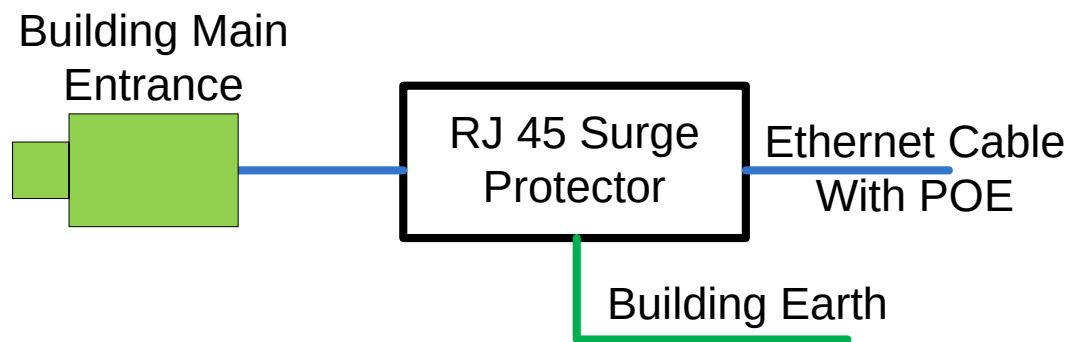
IP Surveillance System – CCTV Outdoor & Lift Lobby Camera Arrangement for New Head Office Building



Power & Data Cabling for PTZ outdoor camera



Power & Data Cabling for PTZ outdoor camera



Section – 10
STANDARD FORMS (BID)

- *Bid Security*
- *Check list*

Note :

The bidders are advised to use the information printed in Italic form and highlighted in this volume as a check list when submitting the bid. However, it is the responsibility of the bidders to comply with all the requirements given in the bidding document. Failure to non compliance with any of them may be a reason for rejection of the Bid.

Notes on Standard Forms :

- *Bidders shall submit the completed Form of Bid Security/Bid Securing Declaration as appropriate in compliance with the requirements of the bidding documents.*
- Bidders should not complete the Form of Agreement at the time of preparation of bids.
- The successful bidder will be required to sign the Form of Agreement, after the award of contract.
- Any corrections or modifications to the accepted bid resulting from arithmetic corrections, acceptable deviations, or quantity variations in accordance with the requirements of the bidding documents should be incorporated into the Agreement.
- The Form of Performance Security, Form of Advance Payment Security and Form of Retention Money Guarantee should not be completed by the bidders at the time of submission of bids.
- The successful bidder will be required to provide these securities in compliance with the requirements herein or as acceptable to the Employer.

10.1 FORM OF BID SECURITY

[this Guarantee form shall be filled in accordance with the instructions indicated in brackets]

----- *[insert issuing agency's name, and address of issuing branch or office]*

Beneficiary: -----
[insert (by PE) name and address of Employer]

Date: ----- *[insert (by issuing agency) date]*

BID GUARANTEE No.: ----- *[insert (by issuing agency) number]*

We have been informed that ----- [insert (by issuing agency) name of the bidder] (hereinafter called "the bidder") has submitted to you its bid dated ----- -- [insert (by issuing agency) date] (hereinafter called "the Bid") for the execution of [insert name of Contract] under Invitation for Bids No. ----- [insert IFB number] ("the IFB").

Furthermore, we understand that, according to your conditions, Bids must be supported by a Bid Guarantee.

At the request of the bidder, we ----- [insert name of issuing agency] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of ----- [insert amount in figures] ----- [insert amount in words]) upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder:

- (a) has withdrawn its Bid during the period of bid validity specified; or*
- (b) does not accept the correction of errors in accordance with the Instructions to Bidders (hereinafter "the ITB"); or*
- (c) having been notified of the acceptance of its Bid by the Employer during the period of bid validity, (i) fails or refuses to execute the Contract Form, if required, or (ii) fails or refuses to furnish the Performance Security, in accordance with the ITB.*

This Guarantee shall expire: (a) if the bidder is the successful bidder, upon our receipt of copies of the Contract signed by the bidder and of the Performance Security issued to you by the bidder; or (b) if the bidder is not the successful bidder, upon the earlier of (i) the successful bidder furnishing the performance security, otherwise it will remain in force up to ----- (insert date)

Consequently, any demand for payment under this Guarantee must be received by us at the office on or before that date.

[signature(s) of authorized representative(s)]

10.2 CHECK LIST FOR BIDDERS

Bidders are advised to complete the following check list:

<i>ITEM</i>	<i>ITB Clause</i>	<i>YES (tick)</i>	<i>REFERENCE</i>
<i>Form of Bid</i>			
<i>Addressed to the Employer ?</i>	<i>1.3.8</i>		
<i>Completed ?</i>	<i>1.3.8</i>		
<i>Signed ?</i>	<i>1.3.8</i>		
<i>Bid Security</i>			
<i>Addressed to the Employer ?</i>	<i>1.3.6</i>		
<i>Format as required ?</i>	<i>1.3.6</i>		
<i>Issuing Agency as specified ?</i>	<i>1.3.6</i>		
<i>Amount as requested ?</i>	<i>1.3.6</i>		
<i>Validity 28 days beyond the validity of Bid ?</i>	<i>1.3.6</i>		
<i>Qualification Information</i>			
<i>All relevant information completed ?</i>	<i>1.1.4</i>		
<i>Signed</i>	<i>1.1.4</i>		
<i>Addendum</i>			
<i>Contents of the addendum (if any) taken in to Account ?</i>	<i>1.2.3</i>		
<i>BID package</i>			
<i>All the documents given in ITB Clause 1.3.2 enclosed in the original and copy ?</i>	<i>1.3.2</i>		
<i>ITB Clause 1.4.1 followed before Sealing the Bid Package</i>	<i>1.4.1</i>		